



SEQUENCE LISTING

<110> FRANCE HYBRIDE
<120> Process for producing a mammal rendered resistant to an infection by an alphaherpesvirus by germinal transgenesis and mammal obtained by the employment of this process.
<130> hvec
<150> Fr02 12775
<151> 2002-10-15
<160> 4
<170> PatentIn version 3.1
<210> 1
<211> 440
<212> PRT
<213> artificial sequence
<220>
<223> Artificial protein fusing the extracellular domain of the protein HveM of the mouse and the crystallisable fragment of the human immunoglobulin G1
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Met Glu Pro Leu Pro Gly Trp Gly Ser Ala Pro Trp Ser Gln Ala Pro
1 5 10 15
Thr Asp Asn Thr Phe Arg Leu Val Pro Cys Val Phe Leu Leu Asn Leu
20 25 30
Leu Gln Arg Ile Ser Ala Gln Pro Ser Cys Arg Gln Glu Glu Phe Leu
35 40 45
Val Gly Asp Glu Cys Cys Pro Met Cys Asn Pro Gly Tyr His Val Lys
50 55 60
Gln Val Cys Ser Glu His Thr Gly Thr Val Cys Ala Pro Cys Pro Pro
65 70 75 80
Gln Thr Tyr Thr Ala His Ala Asn Gly Leu Ser Lys Cys Leu Pro Cys
85 90 95
Gly Val Cys Asp Pro Asp Met Gly Leu Thr Trp Gln Glu Cys Ser
100 105 110
Ser Trp Lys Asp Thr Val Cys Arg Cys Ile Pro Gly Tyr Phe Cys Glu
115 120 125
Asn Gln Asp Gly Ser His Cys Ser Thr Cys Leu Gln His Thr Thr Cys
130 135 140
Pro Pro Gly Gln Arg Val Glu Lys Arg Gly Thr His Asp Gln Asp Thr
145 150 155 160
Val Cys Ala Asp Cys Leu Thr Gly Thr Phe Ser Leu Gly Gly Thr Gln
165 170 175
Glu Glu Cys Leu Pro Trp Thr Asn Cys Ser Ala Phe Gln Gln Glu Val
180 185 190
Arg Arg Gly Thr Asn Ser Thr Asp Thr Thr Cys Ser Ser Asp Pro Glu
195 200 205
Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
210 215 220
Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
225 230 235 240
Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
245 250 255
Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
260 265 270
Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
275 280 285
Tyr Asn Ser Thr Tyr Arg Val Ser Val Leu Thr Val Leu His Gln
290 295 300
Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
305 310 315 320
Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
325 330 335
Arg Glu Pro Gln Val Tyr Thr Leu Pro Ser Arg Asp Glu Leu Thr
340 345 350
Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
355 360 365
Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
370 375 380
Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
385 390 395 400

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Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
 405 410 415
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 420 425 430
 Ser Leu Ser Leu Ser Pro Gly Lys
 435 440

<210> 2
 <211> 581
 <212> PRT
 <213> artificial sequence

<220>
 <223> Artificial protein fusing the extracellular domain
 (domains V-C-C) of the protein HveC of the pig and the
 crystallisable fragment of the human immunoglobulin G1
 <400> 2

Met Ala Arg Met Gly Leu Ala Gly Ala Ala Gly Arg Trp Trp Gly Leu
 1 5 10 15
 Ala Leu Gly Leu Thr Ala Phe Phe Leu Pro Gly Ala His Thr Gln Val
 20 25 30
 Val Gln Val Asn Asp Ser Met Tyr Gly Phe Ile Gly Thr Asp Val Val
 35 40 45
 Leu His Cys Ser Phe Ala Asn Pro Leu Pro Gly Val Lys Ile Thr Gln
 50 55 60
 Val Thr Trp Gln Lys Ala Thr Asn Gly Ser Lys Gln Asn Val Ala Ile
 65 70 75 80
 Tyr Asn Pro Ala Met Gly Val Ser Val Leu Ala Pro Tyr Arg Glu Arg
 85 90 95
 Val Glu Phe Leu Arg Pro Ser Phe Thr Asp Gly Thr Ile Arg Leu Ser
 100 105 110
 Arg Leu Glu Leu Glu Asp Glu Gly Val Tyr Ile Cys Glu Phe Ala Thr
 115 120 125
 Phe Pro Ala Gly Asn Arg Glu Ser Gln Leu Asn Leu Thr Val Met Ala
 130 135 140
 Lys Pro Thr Asn Trp Ile Glu Gly Thr Gln Ala Val Leu Arg Ala Lys
 145 150 155 160
 Lys Gly Lys Asp Asp Lys Val Leu Val Ala Thr Cys Thr Ser Ala Asn
 165 170 175
 Gly Lys Pro Pro Ser Val Val Ser Trp Glu Thr His Leu Lys Gly Glu
 180 185 190
 Ala Glu Tyr Gln Glu Ile Arg Asn Pro Asn Gly Thr Val Thr Val Ile
 195 200 205
 Ser Arg Tyr Arg Leu Val Pro Ser Arg Glu Asp His Arg Gln Ser Leu
 210 215 220
 Ala Cys Ile Val Asn Tyr His Met Asp Arg Phe Arg Glu Ser Leu Thr
 225 230 235 240
 Leu Asn Val Gln Tyr Glu Pro Glu Val Thr Ile Glu Gly Phe Asp Gly
 245 250 255
 Asn Trp Tyr Leu Gln Arg Met Asp Val Lys Leu Thr Cys Lys Ala Asp
 260 265 270
 Ala Asn Pro Pro Ala Thr Glu Tyr His Trp Thr Thr Leu Asn Gly Ser
 275 280 285
 Leu Pro Lys Gly Val Glu Ala Gln Asn Arg Thr Leu Phe Phe Arg Gly
 290 295 300
 Pro Ile Asn Tyr Ser Met Ala Gly Thr Tyr Ile Cys Glu Ala Thr Asn
 305 310 315 320
 Pro Ile Gly Thr Arg Ser Gly Gln Val Glu Val Asn Ile Thr Glu Phe
 325 330 335
 Pro Tyr Thr Pro Ser Pro Pro Glu His Ala Asp Pro Glu Glu Pro Lys
 340 345 350
 Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
 355 360 365
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 370 375 380
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 385 390 395 400
 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val

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405 410 415
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
 420 425 430
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 435 440 445
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
 450 455 460
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 465 470 475 480
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
 485 490 495
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 500 505 510
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 515 520 525
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
 530 535 540
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
 545 550 555 560
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 565 570 575
 Leu Ser Pro Gly Lys
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<210> 3
 <211> 376
 <212> PRT
 <213> artificial sequence

<220>

<223> Artificial protein fusing the V domain of the protein
 HveC of the pig and the crystallisable fragment of the
 porcine immunoglobulin G1

<400> 3

Met Ala Arg Met Gly Leu Ala Gly Ala Ala Gly Arg Trp Trp Gly Leu
 1 5 10 15
 Ala Leu Gly Leu Thr Ala Phe Phe Leu Pro Gly Ala His Thr Gln Val
 20 25 30
 Val Gln Val Asn Asp Ser Met Tyr Gly Phe Ile Gly Thr Asp Val Val
 35 40 45
 Leu His Cys Ser Phe Ala Asn Pro Leu Pro Gly Val Lys Ile Thr Gln
 50 55 60
 Val Thr Trp Gln Lys Ala Thr Asn Gly Ser Lys Gln Asn Val Ala Ile
 65 70 75 80
 Tyr Asn Pro Ala Met Gly Val Ser Val Leu Ala Pro Tyr Arg Glu Arg
 85 90 95
 Val Glu Phe Leu Arg Pro Ser Phe Thr Asp Gly Thr Ile Arg Leu Ser
 100 105 110
 Arg Leu Glu Leu Glu Asp Glu Gly Val Tyr Ile Cys Glu Phe Ala Thr
 115 120 125
 Phe Pro Ala Gly Asn Arg Glu Ser Gln Leu Asn Leu Thr Val Met Gly
 130 135 140
 Ser Val Gly Ile His Gln Pro Gln Thr Cys Pro Ile Cys Pro Gly Cys
 145 150 155 160
 Glu Val Ala Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Pro Lys Asp
 165 170 175
 Thr Leu Met Ile Ser Gln Thr Pro Glu Val Thr Cys Val Val Val Asp
 180 185 190
 Val Ser Lys Glu His Ala Glu Val Gln Phe Ser Trp Tyr Val Asp Gly
 195 200 205
 Val Glu Val His Thr Ala Glu Thr Arg Pro Lys Glu Glu Gln Phe Asn
 210 215 220
 Ser Thr Tyr Arg Val Val Ser Val Leu Pro Ile Gln His Gln Asp Trp
 225 230 235 240
 Leu Lys Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Val Asp Leu Pro
 245 250 255
 Ala Pro Ile Thr Arg Thr Ile Ser Lys Ala Ile Gly Gln Ser Arg Glu

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      260      265      270
Pro Gln Val Tyr Thr Leu Pro Pro Pro Ala Glu Glu Leu Ser Arg Ser
      275      280      285
Lys Val Thr Leu Thr Cys Leu Val Ile Gly Phe Tyr Pro Pro Asp Ile
      290      295      300
His Val Glu Trp Lys Ser Asn Gly Gln Pro Glu Pro Glu Asn Thr Tyr
      305      310      315
Arg Thr Thr Pro Pro Gln Gln Asp Val Asp Gly Thr Phe Phe Leu Tyr
      320      325      330
Ser Lys Leu Ala Val Asp Lys Ala Arg Trp Asp His Gly Asp Lys Phe
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Glu Cys Ala Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
      350      355      360
Ser Ile Ser Lys Thr Gln Gly Lys
      365      370      375

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<210> 4

<211> 578

<212> PRT

<213> artificial sequence

<220>

<223> Artificial protein fusing the extracellular domain
(domains V-C-C) of the protein HveC of the pig and the
crystallisable fragment of the porcine immunoglobulin G1

<400> 4

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Met Ala Arg Met Gly Leu Ala Gly Ala Ala Gly Arg Trp Trp Gly Leu
  1      5      10      15
Ala Leu Gly Leu Thr Ala Phe Phe Leu Pro Gly Ala His Thr Gln Val
      20      25      30
Val Gln Val Asn Asp Ser Met Tyr Gly Phe Ile Gly Thr Asp Val Val
      35      40      45
Leu His Cys Ser Phe Ala Asn Pro Leu Pro Gly Val Lys Ile Thr Gln
      50      55      60
Val Thr Trp Gln Lys Ala Thr Asn Gly Ser Lys Gln Asn Val Ala Ile
      65      70      75
Tyr Asn Pro Ala Met Gly Val Ser Val Leu Ala Pro Tyr Arg Glu Arg
      80      85      90
Val Glu Phe Leu Arg Pro Ser Phe Thr Asp Gly Thr Ile Arg Leu Ser
      95      100      105
Arg Leu Glu Leu Glu Asp Glu Gly Val Tyr Ile Cys Glu Phe Ala Thr
      110      115      120
Phe Pro Ala Gly Asn Arg Glu Ser Gln Leu Asn Leu Thr Val Met Ala
      125      130      135
Lys Pro Thr Asn Trp Ile Glu Gly Thr Gln Ala Val Leu Arg Ala Lys
      140      145      150
Lys Gly Lys Asp Asp Lys Val Leu Val Ala Thr Cys Thr Ser Ala Asn
      155      160      165
Gly Lys Pro Pro Ser Val Val Ser Trp Glu Thr His Leu Lys Gly Glu
      170      175      180
Ala Glu Tyr Gln Glu Ile Arg Asn Pro Asn Gly Thr Val Thr Val Ile
      185      190      195
Ser Arg Tyr Arg Leu Val Pro Ser Arg Glu Asp His Arg Gln Ser Leu
      200      205      210
Ala Cys Ile Val Asn Tyr His Met Asp Arg Phe Arg Glu Ser Leu Thr
      215      220      225
Leu Asn Val Gln Tyr Glu Pro Glu Val Thr Ile Glu Gly Phe Asp Gly
      230      235      240
Asn Trp Tyr Leu Gln Arg Met Asp Val Lys Leu Thr Cys Lys Ala Asp
      245      250      255
Ala Asn Pro Pro Ala Thr Glu Tyr His Trp Thr Thr Leu Asn Gly Ser
      260      265      270
Leu Pro Lys Gly Val Glu Ala Gln Asn Arg Thr Leu Phe Phe Arg Gly
      275      280      285
Pro Ile Asn Tyr Ser Met Ala Gly Thr Tyr Ile Cys Glu Ala Thr Asn
      290      295      300
Pro Ile Gly Thr Arg Ser Gly Gln Val Glu Val Asn Ile Thr Glu Phe
      305      310      315
      320      325      330      335

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Pro	Tyr	Thr	Pro	Ser	Pro	Pro	Glu	His	Gly	Ser	Val	Gly	Ile	His	Gln
			340					345					350		
Pro	Gln	Thr	Cys	Pro	Ile	Cys	Pro	Gly	Cys	Glu	Val	Ala	Gly	Pro	Ser
		355					360					365			
Val	Phe	Ile	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Gln
	370					375					380				
Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	Lys	Glu	His	Ala
385					390					395					400
Glu	Val	Gln	Phe	Ser	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Thr	Ala
			405						410					415	
Glu	Thr	Arg	Pro	Lys	Glu	Glu	Gln	Phe	Asn	Ser	Thr	Tyr	Arg	Val	Val
			420					425					430		
Ser	Val	Leu	Pro	Ile	Gln	His	Gln	Asp	Trp	Leu	Lys	Gly	Lys	Glu	Phe
		435					440					445			
Lys	Cys	Lys	Val	Asn	Asn	Val	Asp	Leu	Pro	Ala	Pro	Ile	Thr	Arg	Thr
	450					455					460				
Ile	Ser	Lys	Ala	Ile	Gly	Gln	Ser	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu
465					470					475					480
Pro	Pro	Pro	Ala	Glu	Glu	Leu	Ser	Arg	Ser	Lys	Val	Thr	Leu	Thr	Cys
			485						490					495	
Leu	Val	Ile	Gly	Phe	Tyr	Pro	Pro	Asp	Ile	His	Val	Glu	Trp	Lys	Ser
			500					505					510		
Asn	Gly	Gln	Pro	Glu	Pro	Glu	Asn	Thr	Tyr	Arg	Thr	Thr	Pro	Pro	Gln
		515					520					525			
Gln	Asp	Val	Asp	Gly	Thr	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Ala	Val	Asp
	530					535					540				
Lys	Ala	Arg	Trp	Asp	His	Gly	Asp	Lys	Phe	Glu	Cys	Ala	Val	Met	His
545					550					555					560
Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Ile	Ser	Lys	Thr	Gln
				565					570					575	
Gly	Lys														